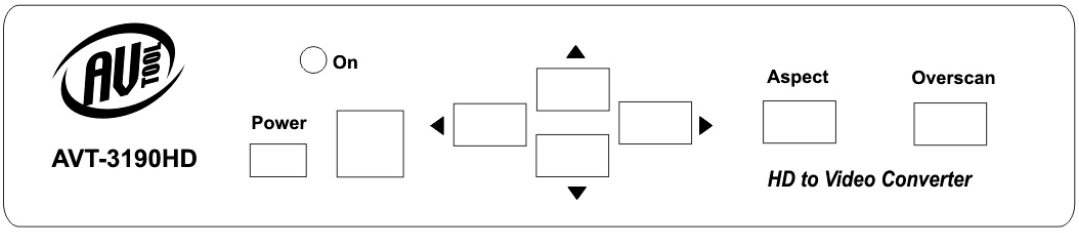
AV Toolbox



Instruction Manual

AVT-3190HD
PC/HDTV to Video
Scan Converter

Table Of Contents

1.0	Introduction	4
2.0	Specifications	6
3.0	Package Contents	7
4.0	Connecting the Hardware	8
5.0	Operating The Unit	9
6.0	Troubleshooting	17
7.0	Limited Warranty	18
8.0	Regulatory Compliance	19
9.0	Contact Information	19

1.0 INTRODUCTION

Thanks for purchasing this AVT-3190HD PC/HDTV to Video Scan Converter product from AV Toolbox. The AVT-3190HD is designed to facilitate the conversion of PC video or HDTV video to either NTSC or PAL video standard outputs or component outputs. AV Toolbox offers a full line of high quality Standards Converters, Up-Converters, Scan Converters, Distribution Amplifiers, Routing Switchers, Time Base Correctors, PIP Display Devices, Quad Splitters and Video Conditioners. RF Modulators, Digital Audio Converters, LCD Monitors/Receivers and Multimedia Cables round out the product offerings.

1.1 Liability Statement

Every effort has been made to ensure that this product is free of errors. AV Toolbox cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user of the hardware to check that it is suitable for his/her requirements and that it is installed correctly. All rights reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher.

AV Toolbox reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way.

All third party trademarks and copyrights are recognised. The AV Toolbox Logo, TV One Logo, TV One-Task and CORIO are the registered Trademarks of TV One. All other trademarks are the property of their respective holders.

1.2 FEATURES

The AVT-3190HD Scan Converter has many features that enable it to perform in a superior manner. Among those features you will find:

- Switchable PC or HDTV Inputs
- NTSC or PAL Outputs, Composite, S-Video or Component (YCbCr)
- Supports PC Inputs up to UXGA (1600x1200@60Hz)
- Supports VGA Refresh Rates to 140Hz
- Supports HDTV Inputs up to 1080i
- Loop Thru Inputs—Both PC and HDTV
- Adjustable Image Scaling: Pan, Position and Zoom
- 2D Flicker Filter
- Aspect Ratio Adjustment
- Test Functions: Overscan, Freeze, Test Pattern and Magnifier
- Remote Control with OSD (On Screen Display)
- RS-232 Control is Fully Supported

2.0 SPECIFICATIONS

Video Input Connectors	
HDTV Video	3x RCA Female (Loops to Output)
PC	1x HD-15 Female (Loops to Output)
Video Output Connectors	
Composite	1x RCA Female
S-Video	4-pin Mini-DIN Female
Component	3x RCA Female
HDTV Video	3x RCA Female (Looping From Input)
PC	1x HD-15 Female (Looping From Input)
Input Signal Characteristics	
HDTV Inputs Resolution Supported	4801, 480p, 576i, 576p, 720p, 1080i
PC Resolutions Supported	VGA, SVGA, XGA, SXGA, UXGA
Output Signal Characteristics	
Composite, S-Video	NTSC or PAL, Interlaced
Component	YCbCr
Control Methods	
Local	Push buttons on unit + OSD
Remote	IR Remote Control w/OSD + RS-232
Mechanical	
Size (H-W-D)	2”x8”x6” (50mmx204mmx155mm)
Weight (Net)	2.2 Lbs (1kg)
Warranty	
Limited Warranty	1 Year, Parts and Labor
Power Requirements	
External AC Adaptor	5 VDC/2A US, UK or EURO AC Plug
Regulatory Approvals	
AVT-3190	FCC, CE
AC Power Adaptor	UL, CE, CSA
Accessories Included	1x AC Power Adapter 1x HD-15 to HD-15 VGA Cable 1x 3 RCA to 3 RCA Cable 1x RCA to RCA Component Cable 1x S-Video to S-Video Cable 1x IR Remote Control 1x Application Software CD 1x Instruction Manual

3.0 CHECKING PACKAGE CONTENTS

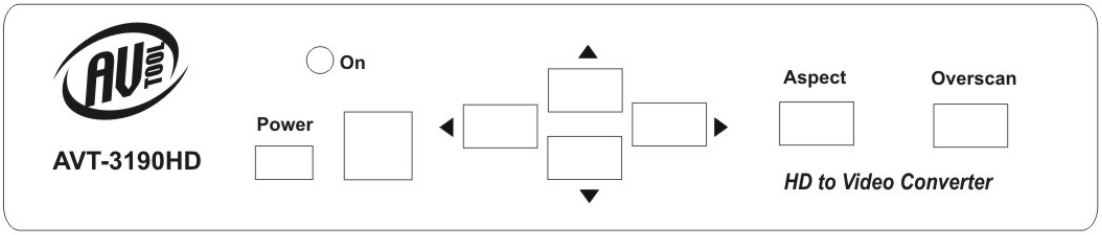
Before attempting to use this unit, please check the packaging and make certain the following items are contained in the shipping carton:

- 1x AVT-3190HD Scan Converter
- 1x AC Power Adapter
- 1x HD-15 to HD-15 VGA Cable
- 1x 3 RCA to 3 RCA Cable
- 1x RCA to RCA Component Cable
- 1x S-Video to S-Video Cable
- 1x IR Remote Control
- 1x Applications Software CD
- 1x Operations Manual

Note: Please retain the original packing material should the need ever arise to return the unit. If you find any items are missing, contact your reseller or AV Toolbox immediately. Have the Model Number, Serial Number and Invoice available for reference when you call.

4.0 CONNECTING THE HARDWARE

Please study the drawings below and become familiar with the inputs, outputs and control locations on the AVT-3190HD.

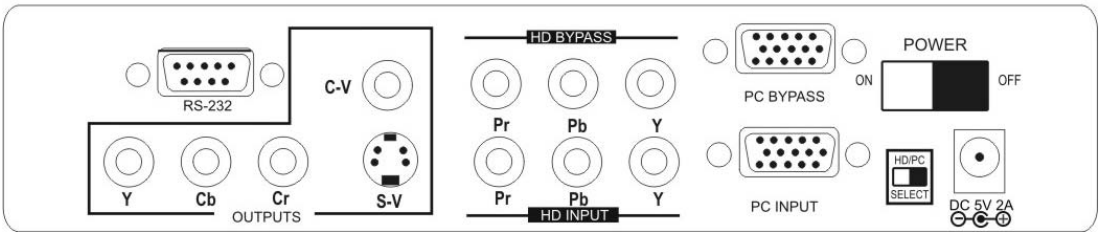


AVT-3190HD Front Panel

The Power Button switches between “Standby” and “On”. When the unit is turned on, the LED marked “On” above and slightly to the right of the power switch will illuminate.

The Square window area to the right of the power switch is the location of the Infrared sensor used by the remote to control the unit. It must remain unblocked if the Remote IR unit is used to control the unit.

The Four buttons with the arrows are used to position and pan the image. The Aspect button allows switching between wide screen and standard display modes and the Overscan button allows magnification of the image.



AVT-3190HD Rear Panel

The inputs and outputs on the rear panel are clearly marked. Connect the appropriate cables to the inputs making certain that the cables are in good condition and undamaged. The power switch (Upper right on the drawing above) removes or applies power to the unit. If the switch is in “Off” position, the power switch on the front will have no effect since it is a Standby switch, not an actual power switch. The Switch next to the power connector is used to switch between PC input and HDTV input.

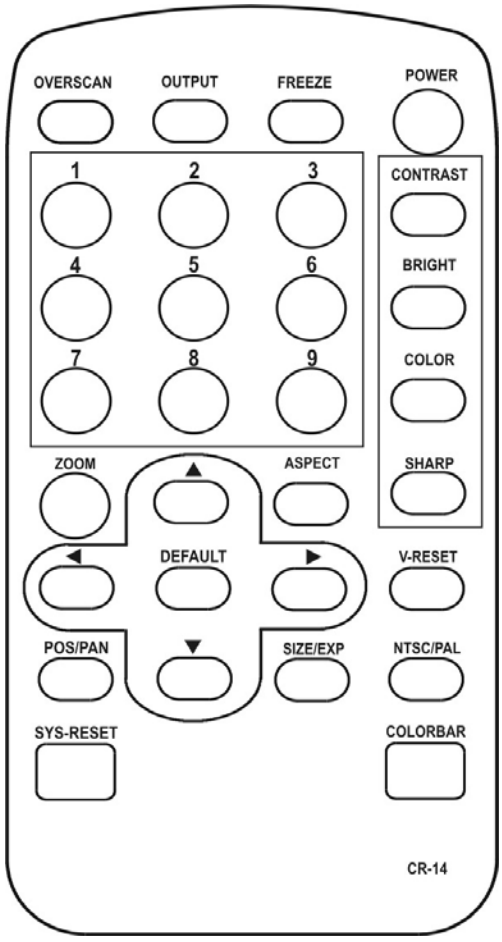
5.0 Operating the AVT-3190HD

Operating the AVT-3190HD is intuitive and easily learned. The operation at the unit itself is accomplished via buttons mounted within the case. Although easily learned, controlling the unit via these buttons is a rather limited way to operate the unit because all functions are not available from these buttons.

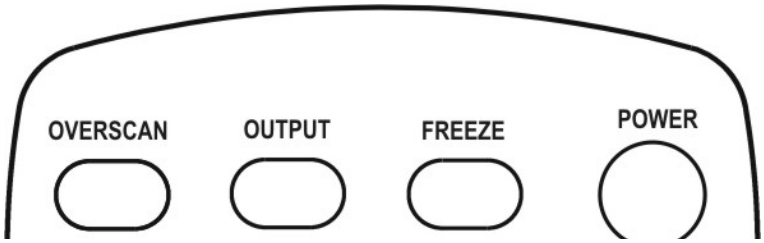
Since virtually all users will operate the unit via the remote control to gain complete control over its functions, it is recommended that you take the time to discover where the various buttons are located on the remote by looking at the actual remote and comparing it to the diagram above.

Like the manual controls on the unit, the labeling is clear for the majority of the functions and the unit's On Screen Display (OSD) will help clarify any confusion.

The pages that follow will magnify the remote's control sections and explain each function. Study the overall drawing and become familiar with the general layout of the remote control. Refer to the descriptions that follow in this manual for detailed information.



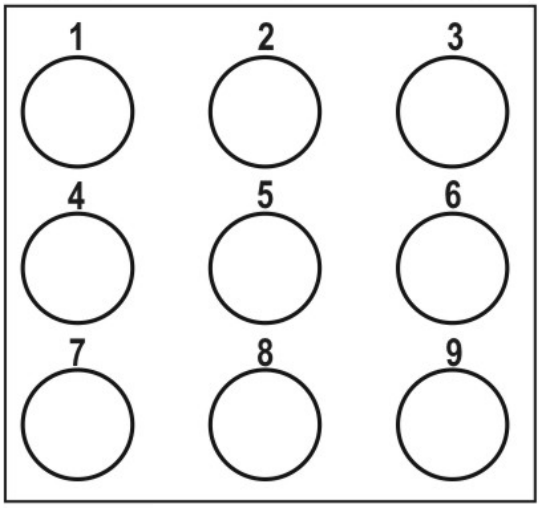
OUTPUT: Toggles between Composite, S-Video and Component Outputs



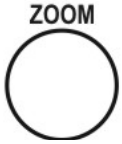
POWER: Switches between “On” and “Standby”

OVERSCAN: Toggles Between over scanned and under scanned normal image.

FREEZE: Causes the image being displayed to freeze.



BUTTONS 1-9: When the Zoom button is pressed, the picture is divided into nine zones. Pressing one of the numbered buttons selects the portion of the image (the zone) you want to enlarge.

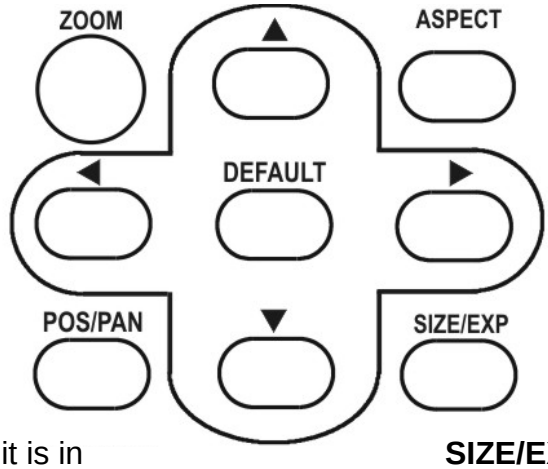


ZOOM: Press the Zoom button to enlarge a section of the picture. Press it again to return to normal image size.

The Four Buttons shown below—**Zoom, Aspect, Pos/Pan** and **Size/Exp**—control picture manipulations and the arrowed buttons work in conjunction with these four buttons to do the actual manipulations. The **Default Button** (in the middle of the arrow button matrix) returns the following parameters to factory presets: Zoom, Position, Size and Picture Adjustments. Descriptions of the Zoom, Aspect, Pos/Pan and Size/Exp functions are shown below.

ZOOM: As explained above, this Button places the unit in the Zoom mode and the numbered buttons select the portion of the image to be zoomed. Once selected, the arrowed buttons allow zooming or movement across the selected image.

ASPECT: This button toggles three modes. Full is the regular 4:3 aspect mode. The second toggle activates the Pan and Scan mode wherein you can adjust the image horizontally and vertically. The final toggle activates the letterbox mode.



POS/PAN: If the unit is in underscan mode, pressing this button allows the user to position the under-scanned image anywhere on the raster using the arrow buttons. If the unit is in the overscan mode, pressing this button allows the user to pan the over-scanned image using the arrow buttons

SIZE/EXP: When in the underscan mode, pressing this button allows the arrow keys to expand or shrink the image within the monitor's raster. If the system is in overscan mode, the arrow buttons set the degree of overscan.

Along the right side and bottom of the remote control there are several control buttons. The functions are:

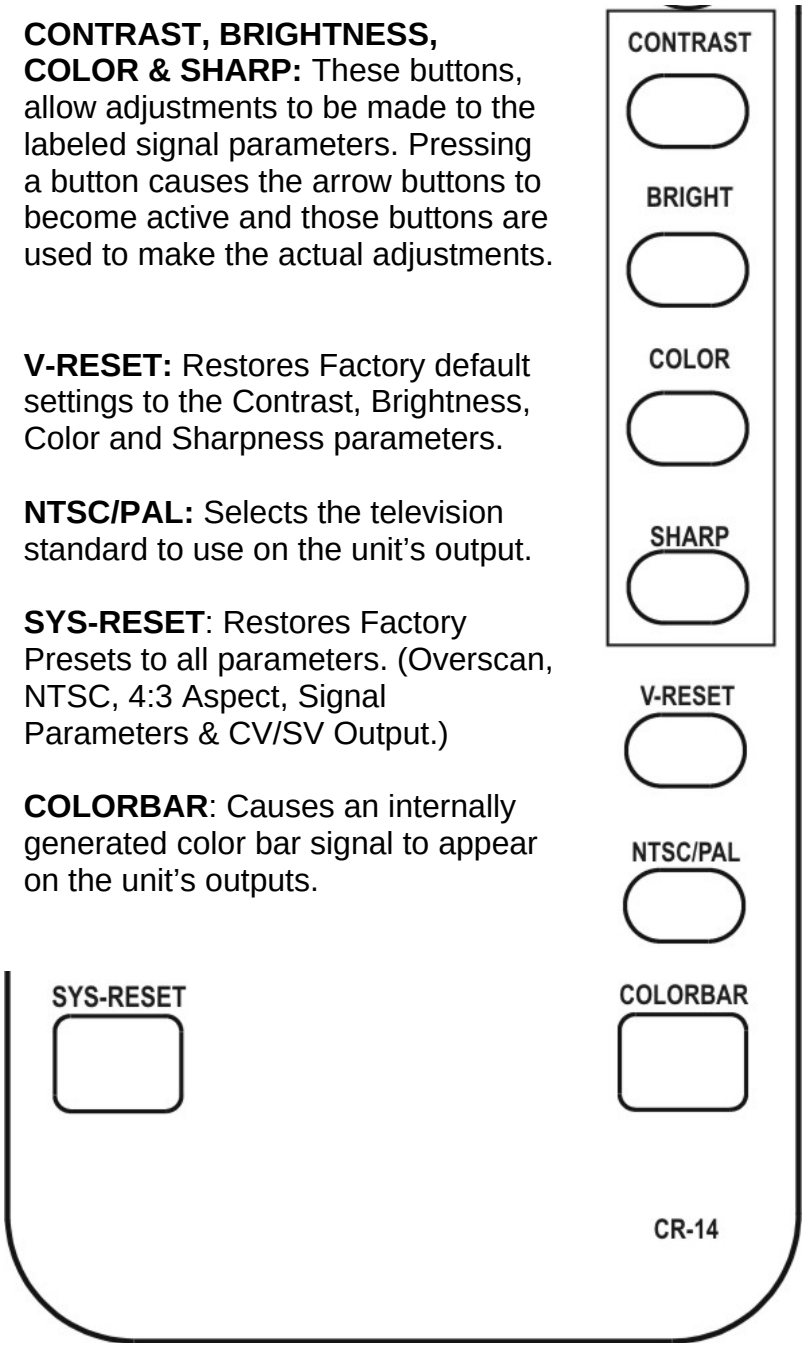
CONTRAST, BRIGHTNESS, COLOR & SHARP: These buttons, allow adjustments to be made to the labeled signal parameters. Pressing a button causes the arrow buttons to become active and those buttons are used to make the actual adjustments.

V-RESET: Restores Factory default settings to the Contrast, Brightness, Color and Sharpness parameters.

NTSC/PAL: Selects the television standard to use on the unit's output.

SYS-RESET: Restores Factory Presets to all parameters. (Overscan, NTSC, 4:3 Aspect, Signal Parameters & CV/SV Output.)

COLORBAR: Causes an internally generated color bar signal to appear on the unit's outputs.



5.1 RS-232 Operation

Software is included to allow control of the AVT-3190HD via a computer. The operation under RS-232 control is explained below.

5.1.1 Installation of the Software (Windows 98/ME/2000/XP)

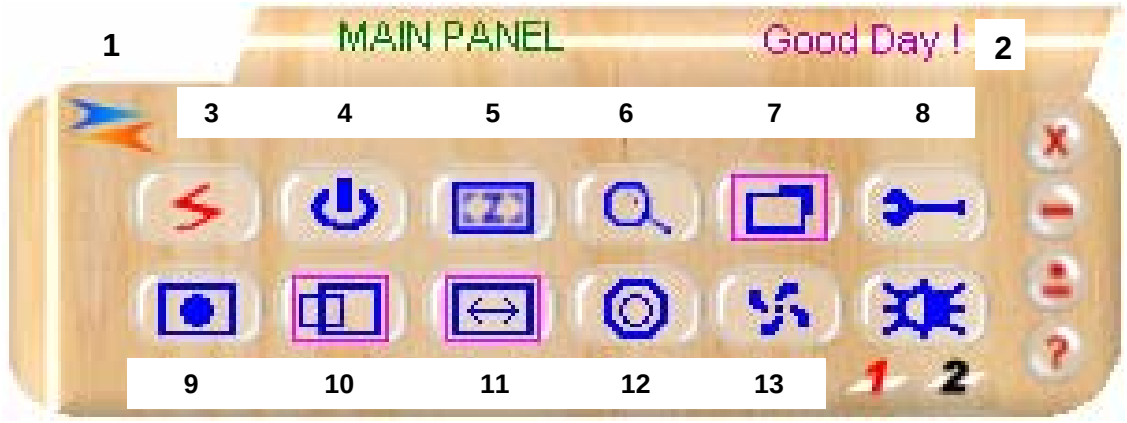
- Place CD in appropriate drive and execute the setup.exe function from the CD. (The computer will probably update some files causing the need to reboot after the initial setup has finished. If this happens, reboot and run setup a second time.)

- Once fully installed, click the taskbar menu (Start>Programs>Scan Converter) to start the RS-232 software.

5.2 Operation Under Control of RS-232 Software

A main panel will appear containing 19 icons that provide the control functions of the unit (except icons 16 through 19). Click the icon to perform the function.

Refer to the list of numbers on the next page to learn the function of the icons.



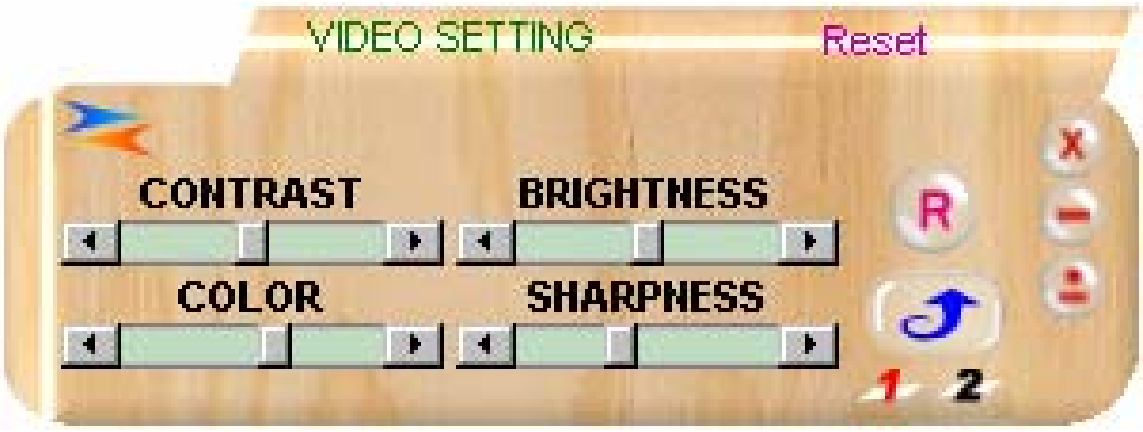
14 (Above)
15 (Below)

Icon Number	Meaning
1	Connection Status - If grey, there is no connection
2	Prompt Text
3	Power On Indicator
4	System Reset
5	Zoom
6	Magnifier
7	Over/Under Scan
8	Option
9	Aspect
10	Pan/Position
11	Expand/Size
12	Output Format
13	Screen Freeze
14	Video Settings
15	RS-232 Com Port in use
16	Close
17	Minimize
18	System Tray
19	About

Selecting **Zoom** will cause a sub menu to appear where the actual adjustments are made. The functionality is just like the remote control for the sub-panel wherein the arrows and number matrix control the same things that the remote control did. (The upward facing arrow at the lower right returns you to the main menu.)

Selecting **Position/Pan or Size/Expand** will cause a sub menu to appear where the actual adjustments are made. The functionality is just like the remote control for the sub-panel wherein the arrows control the same things that the remote control did. (The upward facing arrow at the lower right returns you to the main menu.)

Selecting **Video Settings** on the main menu will call up another sub-panel where the actual adjustment can be made. Clicking the “R” icon on this panel resets these settings to Factory Default. Again, the upward facing arrow at the lower right returns you to the main menu.

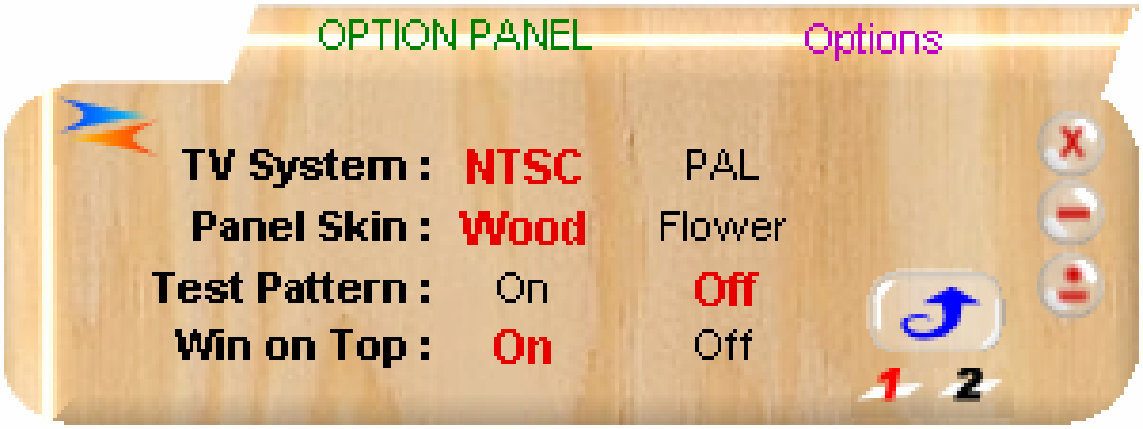


Clicking the **Magnifier** icon will call up a sub-panel that allows adjustment of picture size. This only works when in the PC mode.

Clicking 1.5 magnifies the image 1.5 times. Selecting 2.0 results in a 2X magnification. Clicking “S” generates an undersize image and B yields a ”Big” frame. The two intertwined arrows call up an image refresh routine and the “X” closes this sub-panel.

There are two other sub-panels available:

Clicking **Option** causes the following sub-panel to appear. (Click on the desired action.)



Finally, the last sub-panel displays software and firmware information. Click the **About** icon to call up this display:

Again, the upward facing arrow at the lower right returns you to the main menu.

5.3 Pinouts for RS-232 Cable

The connections for the RS-232 connectors are as follows:

AVT-3190 Connector Pinout	PC Serial Connector Pinout
1, NC	1, NC
2, TxD	2, RxD
3, RxD	3, TxD
4, NC	4, NC
5, GND	5, GND
6, NC	6, NC
7, NC	7, NC
8, NC	8, NC
9, NC	9, NC

6.0 Troubleshooting

Other than checking for faulty cables, the only common problem would be choosing a wrong Output Setting. Make sure the AVT-3190HD is capable of handling the resolution and refresh rate selected and make sure the output format selected (Composite, S-Video or YCbCr) is correct for the type of cable and connector being used at the output. Also make certain that you have selected the correct television standard (NTSC or PAL).

After trying the above suggestions should the problem still persist, contact your dealer for additional suggestions before contacting TV One. Should the dealer's technical personnel be unable to assist you, contact TV One via our support

website: ***http://tvone.crmdesk.com.*** Create a technical support request on the site and our support team will respond within a short period of time.

7.0 LIMITED WARRANTY

LIMITED WARRANTY – With the exceptions noted in the next paragraph, AV Toolbox warrants the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a period of one year from the date of purchase. Should this product, in AV Toolbox's opinion, prove defective within this warranty period, AV Toolbox, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of AV Toolbox. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

Items integrated into AV Toolbox products that are made by other manufacturers, notably computer hard drives and liquid crystal display panels, are limited to the term of the warranty offered by the respective manufacturers. Such specific warranties are available upon request to AV Toolbox.

If repairs are necessary under this warranty policy, the original purchaser must obtain a Return Authorization Number from AV Toolbox and return the product to a location designated by AV Toolbox, freight prepaid. After repairs are complete, the product will be returned, freight prepaid.

LIMITATIONS - All products sold are "as is" and the above Limited Warranty is in lieu of all other warranties for this product, expressed or implied, and is strictly limited to two years from the date of purchase. AV Toolbox assumes no liability to distributors, resellers or end-users or any third parties for any loss of use, revenue or profit.

AV Toolbox makes no other representation of warranty as to fitness for the purpose or merchantability or otherwise in respect of any of the products sold. The liability of AV Toolbox with respect to any defective products will be limited to the repair or replacement of such products. In no event shall AV Toolbox be responsible or liable for any damage arising from the use of such defective products whether such damages be direct, indirect, consequential or otherwise, and whether such damages are incurred by the reseller, end-user or any third party.

8.0 REGULATORY COMPLIANCE

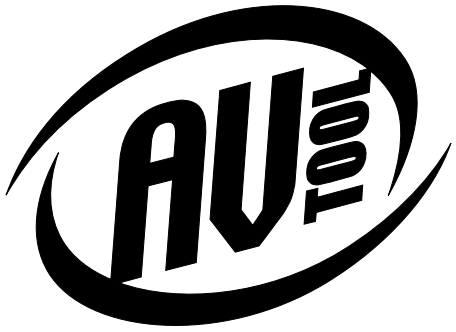
This product complies with the relevant standards for CE and FCC approval.

The Power Adaptor/Supply has been tested for compliance with: UL, CSA and CE standards.

9.0 CONTACT INFORMATION

Should you have questions or require assistance with this product in areas not covered by this manual, please contact us at the location shown below:

AV Toolbox
1350 Jamike Drive
Erlanger, Ky, 41018
859.282.7303



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